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**Cc:** Dreyfus, Bethany[Dreyfus.Bethany@epa.gov]; Plate, Mathew[Plate.Mathew@epa.gov]; Stralka, Daniel[Stralka.Daniel@epa.gov]  
**From:** Lee, Alana  
**Sent:** Fri 1/29/2016 8:48:31 PM  
**Subject:** FYI: Additional EPA information: Health and Safety Plans for EPA Review (14-21/22 Moffett Gateway Water and Sewer Replacements)  
[Excerpt 501 Ellis SMP Aug 2014 to City.pdf](#)  
[EPA R9 QA 05.2-2005.pdf](#)  
[EPA 5035A.pdf](#)  
[R9 TCE Interim Action Levels and Response Recs memo - 2014.pdf](#)  
[TCE Grab GW w sewer lines - updated Aug 2014.pdf](#)  
[EPA TCE Soil Gas - Leong Area - Sept 2013.pdf](#)

Here's what I provided to the City regarding upcoming potholing / sewer replacement work.

Note: R9 has SOP1225 Soil sampling for VOCs for EPA R9 field team that is nearly finalized and hopefully I will be able to share outside EPA soon.

**From:** Lee, Alana  
**Sent:** Thursday, January 28, 2016 10:19 PM  
**To:** 'Bumanglag, Arlynn' <Arlynn.Bumanglag@mountainview.gov>; Turner, Alison <alison.turner@mountainview.gov>  
**Subject:** Additional EPA information: Health and Safety Plans for EPA Review (14-21/22 Moffett Gateway Water and Sewer Replacements)

Hi Arlynn and Alison,

Attached for your reference are some of EPA's Soil Sampling guidelines and EPA Region 9's Response Action Levels and Recommendations to Address Near-term Inhalation Exposures to Trichloroethene (TCE) in Air From Subsurface Vapor Intrusion.

I may have already provided, but here is an excerpt of a procedures for field monitoring and sampling that may be helpful. EPA continues to improve and tailor the procedures based on the planned work activities in proximity to known or unknown TCE contamination in the area. I've also included a couple figures showing EPA's TCE soil gas and shallow groundwater sampling

results near the proposed sewer replacement work areas.

Please let me know if you have any questions.

Alana Lee

EPA Superfund Project Manager

415.972.3141

[Lee.Alana@epa.gov](mailto:Lee.Alana@epa.gov)

**From:** Lee, Alana [<mailto:lee.alana@epa.gov>]

**Sent:** Monday, January 25, 2016 8:09 PM

**To:** Turner, Alison

**Cc:** Bumanglag, Arlynn

**Subject:** EPA Comments: Health and Safety Plans for EPA Review (14-21/22 Moffett Gateway Water and Sewer Replacements)

Hi Alison and Arlynn,

EPA has reviewed the Geocon Soil Sampling Scope, Map, and Health & Safety Plan and the EXARO Potholing Scope and Map and Health & Safety Plan provided to EPA on January 13, 2016. Below are EPA comments regarding the proposed scope and work activities.

1. The purpose and rationale for collecting the samples are unclear. The document must be revised to describe why these samples are being collected, and the rationale for the locations and depths selected.
2. It would be helpful to provide the scope and procedures of subsurface activities for the actual sewer replacement work to assess how the proposed sampling achieves the intended objectives.

3. The results of previous investigations in the area presented in the plans do not accurately reflect the maximum TCE concentrations in soil gas, groundwater, and soil in the project area. The plans must be updated to incorporate updated data and a figure showing the proposed soil sampling and pothole locations in proximity to TCE soil, groundwater, and soil gas sample location results.
4. The scopes of work provided are for the collection of environmental and geotechnical samples only. If excavation and trenchwork will be performed as part of the water and sewer replacements, a Soil Management and Air Monitoring Plan must be prepared to describe how potentially contaminated soils and vapors will be monitored and managed to protect workers and the public.
5. Given the known groundwater and soil gas contamination in the vicinity of the Leong Dr and Moffett Gateway properties, discrete samples for VOC analysis, and not composited samples, should be collected and analyzed. EPA Method 5035 should be used for the collection and preservation of soil samples for VOC analysis.
6. Because there is the potential TCE exposure to workers from TCE vapors from the subsurface soil, soil gas, and groundwater, EPA's accelerated and urgent response levels for TCE should be used as triggers for worker protection during subsurface activities. For excavation and trench work deeper than 2 feet below ground surface must include monitoring of the excavation area and breathing zone of workers with an instrument or sampler capable of measuring TCE at a detection limit below the accelerated response action level of 7 micrograms per cubic meter of TCE in air. Other alternatives include: TCE passive sampler badging of workers entering the excavation, use of respirator with appropriate cartridge during subsurface work activities, TCE-specific monitoring of excavations.
7. The PID screening procedures for potentially contaminated soils is not adequately defined and should follow the Soil Management procedures in EPA-approved Soil Management Plans in the MEW Superfund Area.

In addition, I would like to discuss and coordinate EPA collection of soil gas and/or soil samples during the City's subsurface work activities to further characterize potential historical release of TCE from the sewer line segments that are being replaced.

I look forward to our call on Tuesday at 1:30 pm to discuss further.

Alana Lee

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